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Feature Article - Changes to economic statistics as a result of taxation reform

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SYNOPSIS

This article summarises some changes to ABS infrastructure during 2002 and the consequences for statistical series. There will be some short-term disruptions to statistical series, but they will result in a much more effective statistical system, in particular, providing more accurate and coherent statistical series while imposing less load on providers of data.

INTRODUCTION

In April 2000, the Australian Bureau of Statistics (ABS) released an information paper entitled **ABS Statistics and The New Tax System** (Cat. no. 1358.0). That paper described how the changes associated with The New Tax System would impact on a wide range of statistical series produced by the ABS. The information paper also foreshadowed changes which would occur during 2002, to the infrastructure used by the ABS to support compilation of those statistical series.

In May 2002, the ABS released a further information paper, entitled **Improvements in ABS Economic Statistics [Arising from The New Tax System]** (Cat. no. 1372.0). That paper provides further information about the changes to the ABS infrastructure and their treatment in statistical series, including the national accounts.

This article summarises the May 2002 paper.

CHANGES TO THE INFRASTRUCTURE

The ABS is taking the opportunities presented by the introduction of the Australian Business Number (ABN) and Australian Business Register (ABR) to improve the efficiency of its Business Register. Changes to this key aspect of the ABS infrastructure have consequent impacts on ABS economic series. These changes were implemented to the Business Register before June 2002, and the new infrastructure is to be used for September quarter reference periods in subannual collections and for 2001/02 annual collections (the old Business Register was used up to June quarter reference periods in subannual collections).

POPULATION CHANGES

In 2000, the group employer (GE) tax obligation was replaced with the pay as you go withholding (PAYGW) tax obligation. The ABS had previously used the existence of a GE obligation with the

Australian Taxation Office (ATO) as a proxy to identify employing businesses to include in the Business Register. The slight differences in the coverage of the two tax obligations caused minor changes in survey populations. The impacts on series were removed in order to keep series on the same basis.

The ABS also took the opportunity to review the coverage of the Business Register at the same time. For historical reasons, there were approximately 10% of the businesses on the Business Register for which a link to a GE obligation had not been identified. By and large these businesses were defunct, and/or not economically significant. These businesses were removed from the Business Register, and the subsequent impact on estimates was also removed.

The impact of both these changes will now flow through to economic series from the September quarter 2002 reference period.

Up until now, the scope of the ABS Business Register has been restricted to employing businesses. The ABR contains both employing and non-employing businesses. Because of this, the scope of the ABS Business Register will be expanded to include non-employing businesses. The inclusion of these businesses in ABS surveys will lead, in time, to more comprehensive measures of economic activity in collections sourced from the ABS Business Register. The desirability of this will be investigated in the future.

UNITS CHANGES

In mid 2002, the ABS also changed its economic statistics unit model. The new model splits the business population into two groups. For the majority of businesses the Australian Business Number (ABN) unit is used as the ABS statistical unit (i.e. when collecting data we approach the "ABN" unit and obtain information about all its operations). When the ABN unit is not suitable for ABS statistical requirements and the business is significant, a units model is used that largely maintains the previous business structure for these significant businesses.

The change of unit and associated information caused some businesses (or parts of businesses) to move into or out of coverage of some ABS collections, or to change industry within collections. For 98.5% of businesses, the unit structure remained the same under the new model.

CLASSIFICATION CHANGES

Where an ABN structure is used by the ABS for a business, the ABS does not maintain classification information (e.g. industry) about the business as it is available from the ATO. The ATO has been coding businesses to Australia and New Zealand Standard Industrial Classifications (ANZSIC) since 1992. An additional entity type classification (eg, company, trust, superannuation fund, etc) was introduced with ABN registration. The ABS has commenced using the ANZSIC codes identified by the ATO (previously they have only been used for new businesses), and has reclassified businesses to Standard Institutional Sector Classification of Australia (SISCA) sectors, based on the ATO ANZSIC and the ATO entity type.

IMPROVEMENTS TO EMPLOYMENT BENCHMARKS

Where an ABN structure is used by the ABS, the previous employment size measure on the Register (often several years out of date) was replaced with a much more current modelled employment size measure based on Business Activity Statement (BAS) returns and ABN registration. This will improve the efficiency of surveys used to compile economic series. The resultant improvement does not impact on the levels of series, except where the size measure is

used to determine the coverage of a survey. The two exceptions are the quarterly profits series and the quarterly engineering construction series, where different businesses are considered to be within coverage based on the new size measure.

TREATMENT IN COLLECTIONS

The anticipated impact of the infrastructure changes is being measured prior to the event, generally based on the last reference period prior to the changes. For most annual series, this impact will be presented as a series break in the publication, with information provided on the size of the break (this is referred to as 'bridging'). For most subannual series, the historical series will be adjusted so that all estimates appear consistent, i.e. making the movement estimates as continuous as possible without abrupt breaks at level between the last estimate compiled on the old basis and the first estimate on the new basis (this is referred to as 'backcasting').

The measurement of the impact may not take place at the finest level of detail within a publication. Series published at a finer level than that at which measurement takes place may be adversely affected by having an impact pro-rated from a higher level.

The changes to the infrastructure will also decrease the quality of movement estimates between the last estimate compiled on the old basis and the first estimate compiled on the new basis, particularly for subannual series, although the ABS will do all it can to minimise the decrease in quality (either by increasing sample sizes for the period of introduction or phasing in some aspects of the change). The decrease in quality could be particularly severe for series at a detailed level. Following the period of implementation, the quality of movement estimates will be restored or improved.

Periods for which the quality of subannual movements are affected are set out in the table. This table also shows details of the timing of the measurement, introduction of the impacts and the treatment for the series.

Collection	Reference Period For Measurement	First Reference Period Published on New Basis	Backcast / Bridge	Time of Publication Release	Periods For Which Subannual Movements Affected
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SUBANNUAL INDICATORS

Retail Business	April month 2002	July month 2002	Backcast	early Sept 2002	June - July 2002 Sept - Oct 2002 Dec 2002 - Jan 2003 Mar - Apr 2003 June - July 2003
New Capital Expenditure	June quarter 2002	September quarter 2002	Backcast	late Nov 2002	June qtr - Sept qtr 2002
Quarterly Economic Activity	September quarter 2002	December quarter 2002	Backcast	early Mar 2003	
Engineering Construction	September quarter 2002	December quarter 2002	Backcast	Apr 2003	Sept qtr - Dec qtr 2002

ANNUAL BENCHMARKS

Economy Wide Statistics	2000-2001	2001-2002	Bridge	late March 2003 (Manufacturing)
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Agricultural Commodity	2001-2002	2002-2003	Bridge	May 2003 (Economic Activity) Aug 2003 (Mining and Utilities) Oct 2003	
OTHER					
Average Weekly Earnings	June quarter 2002	September quarter 2002	not determined	Nov 2002	June qtr - Sept qtr 2002
Job Vacancies	June quarter 2002	September quarter 2002	not determined	Sept 2002	June qtr - Sept qtr 2002
Business Use of IT	2001-2002	2002-2003	Bridge	March 2004	
Book Publishers	2000-2001	2001-2002	Backcast	June 2003	
Book Retailers					

TREATMENT IN NATIONAL ACCOUNTS

The changes will be introduced into the national accounts in two phases. In Phase 1 the quarterly survey data on the new basis will be used to move forward the national accounts annual benchmarks compiled on the old basis. This will entail using the survey backcast data, and will occur as the data become available from the September and December quarter 2002 surveys. In Phase 2 all the affected national accounts annual benchmarks will be recompiled using source data compiled on the new basis. The new benchmarks will be introduced into the 2002-2003 annual national accounts and the September quarter 2003 release.

FUTURE CHANGES

While every effort has been made to incorporate all taxation-related changes into the infrastructure changes that occurred this year, there remain several outstanding issues that may have a future impact on some or all statistical series:

- **Basing more series on populations drawn from the ABS Business Register.** Some ABS business collection survey populations are maintained on registers separate from the ABS Business Register. The ABS is now entering into a program of migrating some of these collections to the centralised infrastructure. There could be impacts on the series as they migrate due to differences in units models and classifications, and taking the opportunity to review the processes for identifying in-scope businesses. The short-term candidates for migration are the finance surveys; financial accounts surveys; and the international investment, international trade in services, livestock slaughtering, poultry slaughtering and the wool brokers and receivals surveys.
- **Changes to coverage.** As mentioned above, with the introduction of ABN registration, the ABS has access to information about most non-employing businesses through the ATO. The introduction of non-employers, or significant non-employers, to the coverage of some ABS series is being investigated with any changes deemed worthwhile most likely to be introduced during 2004.
- **Refinements to units model.** One aspect of the new units model that will not be included in the current infrastructure changes is the treatment of ancillary units. The impacts of any change to the treatment of ancillaries will be held over to be incorporated in the next round of changes, likely to be in 2004.
- **Further improvements in sampling efficiency.** The ABN registration process and Business Activity Statement (BAS) data from the ATO provide the ABS with the opportunity to use size measures other than employment (or modelled employment) to improve the

efficiency of sample designs. This change in itself would not affect levels of series, but would affect the quality of movement estimates from one period to the next. For most collections, the change would coincide with future changes in coverage to include non-employers.

- **Data substitution.** As well as using BAS data to change the coverage of economic collections and improve the sampling efficiency, the ABS is also examining opportunities to replace data collected from businesses with data collected by the ATO on the BAS. The work underway is aimed at implementation in 2004 if the strategy is feasible.
- **New economic indicator series.** The BAS data can also be used to derive economic series in their own right. The data items contained in the BAS could allow the construction of proxies for both value added and gross operating surplus. Preliminary investigations into the development of new series in this way suggested that it would be worthwhile reexamining their feasibility once more data accumulate and their time series behaviour can be sensibly assessed. ABS plan to revisit the initial feasibility studies during 2003.
- **Income Tax Consolidations.** The process of businesses consolidating for income tax returns could have an impact on the new units model that the ABS is adopting. A further review of the units model is scheduled for mid 2003, with any changes required to be incorporated in 2004.

FURTHER INFORMATION

For more details of the issues covered in this article, please consult the publication **Information Paper: Improvements in ABS Economic Statistics [Arising from The New Tax System]** (Cat. no. 1372.0) or contact Mr Paul Mahoney on Canberra 02 6252 5505, mobile 0418 445 266, fax 02 6252 7511, or email paul.mahoney@abs.gov.au

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